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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,699	10/16/2001	Thomas N. Indermaur	10007795-1	3755
7590 07/14/2004			EXAMINER	
HEWLETT-PACKARD COMPANY			DIMYAN, MAGID Y	
Intellectual Property Administration			ART UNIT	
P.O. Box 272400			PAPER NUMBER	
Fort Collins, CO 80527-2400			2825	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/977,699

Applicant(s)

INDERMAUR, THOMAS N.

Examiner

Magid Y Dimyan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/29/2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Acknowledgement***

1. Receipt is acknowledged to the Amendments to the Claims and to the Remarks, in response to the First Office Action. Both were filed on April 27, 2004. Claims 1, 3 – 17 and 19 – 23 remain pending in this application.

### ***Response to Amendment***

2. The Examiner has found new grounds of rejection, as recited below.

### ***Claim Objections***

3. Claims 7, 10, 15 and 19 are objected to because of the informalities cited below. Appropriate correction is required.
4. Claims 7 and 15 recite the limitation “conflicting labels”. Claim 19 recites “two conflicting inferred and renamed labels”. There is insufficient antecedent basis for these limitations in the claims, thus rendering the obtaining/identifying of the shortest path usage as indefinite steps.

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5. Claim 10 is very confusing to the Examiner because it combines a means into a method claim that should more clearly recite a step. For example, a more comprehensible amended claim such as deleting line 5, and inserting --using a short locator tool to infer labels to the copy of the artwork.-- is suggested.

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### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3 – 6 and 10 – 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Pub. No. US 2002/0046386 to Skoll et al (hereinafter, Skoll).

8. Referring to claim 1, Skoll recites all the elements claimed herein of determining the location of a short in a circuit that includes (a) running a connectivity extraction (see page 1, paragraphs 0003 and 0006); (b) determining and locating a short in the circuit using the schematic (see page 3, paragraph 0032 and page 8, paragraphs 0105 – 0106); (c) making a copy of the artwork

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(see column 6, paragraphs 0073 – 0075); and (d) comparing artwork with the schematic (see Figs. 15 A, 15B and page 8, paragraph 0107).

9. As for claims 3 and 4, see (8) above, as well as Figs. 15A and 15 B; page 8, paragraphs 0104 – 0107, which disclose how to evaluate the connectivity text file of the schematic and obtaining the electrical connection information, as claimed herein.

10. As per claim 5, see Fig. 12; page 7, paragraphs 0083 – 0086 which cite how the signal names are labeled, as claimed herein.

11. Referring to claim 6, see above, as well as page 6, paragraph 0075, which cite how a copy of the artwork can be generated before running the tool, as claimed herein.

12. Claims 10 – 14 contain the same limitations cited in (8) – (11) above, and thus the same rejections apply.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 7 – 9, 15 – 17 and 19 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skoll in view of U.S. patent No. 6,405,351 to Steiss et al. (hereinafter, "Steiss").

14. The teachings of Skoll pertaining to determining the location of a short circuit in a circuit design are cited above, and described in more detail in his disclosure. However, Skoll does not disclose the additional limitation of having an algorithm for obtaining the shortest path in his invention, as claimed. On the other hand, Steiss discloses a system for verifying connections in a circuit by applying an algorithm on a circuit schematic (col. 3, lines 26 – 29) that identifies shortest paths between nodes i.e., labels (see Fig. 4; col. 17, lines 23 – 55). Since obtaining the shortest path between conflicting labels (for the determination of a short in a circuit) will speed up identifying shorts and making appropriate corrections to the artwork, it would therefore be obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Skoll and Steiss to achieve the same inventions claimed herein.

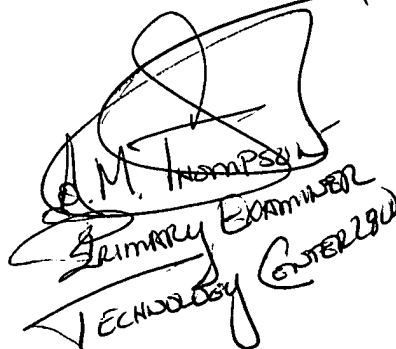
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### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magid Y Dimyan whose telephone number is (571) 272-1889. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
M. Y. Dimyan  
Primary Examiner  
Technology Center

Magid Y Dimyan  
Examiner  
Art Unit 2825

myd  
11 July 2004